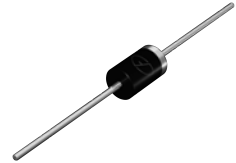


## Features

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diode
- ◆ Ultrafast recovery time for high efficiency
- ◆ Glass passivated junction
- ◆ High temperature soldering guaranteed:  
250°C/10seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3Kg) tension



**Package: DO-201AD**

## Mechanical Data

- ◆ Cases: JEDEC DO-201AD, molded plastic body over passivated chip
- ◆ Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Mounting position: Any
- ◆ Weight: 0.045 ounce, 1.2 grams

## Maximum Ratings and Electrical Characteristics

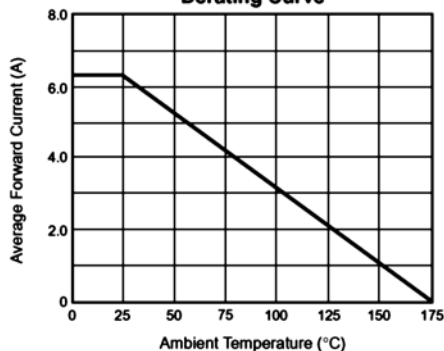
(T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbols	MUR420	Units
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	Volts
Working Peak Reverse Voltage	V <sub>RWM</sub>	200	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	400	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> =80°C (See figure 1)	I <sub>F(AV)</sub>	4.0	Amps
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load) (JEDEC Method)	I <sub>FSM</sub>	125.0	Amps
Maximum Instantaneous Forward Voltage (Note 1) at 3.0A, T <sub>J</sub> =150°C at 3.0A, T <sub>J</sub> =25°C at 4.0A, T <sub>J</sub> =25°C	V <sub>F</sub>	0.710 0.875 0.890	Volts
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage (Note 1) T <sub>J</sub> =25°C T <sub>J</sub> =150°C	I <sub>R</sub>	5.0 150	uA
Maximum Reverse Recovery Time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>F</sub> =0.25A	t <sub>rr</sub>	25	nS
Maximum Reverse Recovery Time at I <sub>F</sub> =1.0A, di/dt=50A/us, V <sub>R</sub> =30V, I <sub>F</sub> =10% I <sub>RM</sub>	t <sub>rr</sub>	35	nS
Maximum Forward Recovery Time at I <sub>F</sub> =1.0A, di/dt=100A/us, recovery to 1.0V	t <sub>fr</sub>	25	nS
Typical Thermal Resistance Junction to Ambient (Note 2)	R <sub>θJA</sub>	28	°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +175	°C

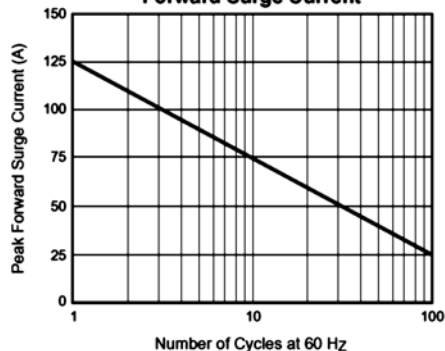
- Notes:**
1. Pulse test: t<sub>p</sub>=300us, duty cycle < 2%
  2. Lead length = 1/2" on P.C. Board with 1.2" x 1.2" copper surface

## Ratings and Characteristics Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

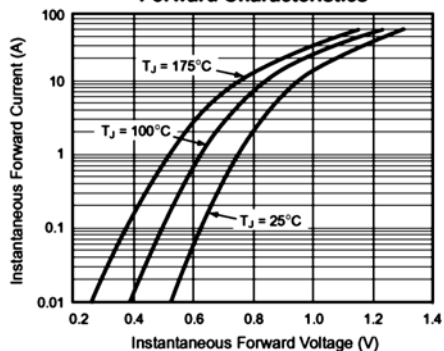
**Fig. 1 – Forward Current Derating Curve**



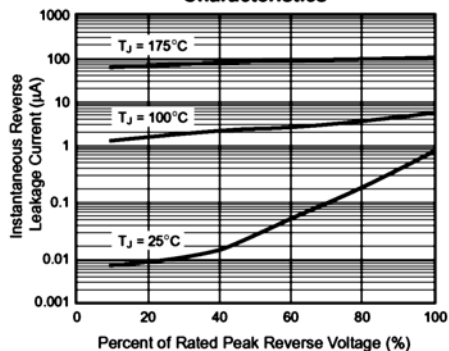
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



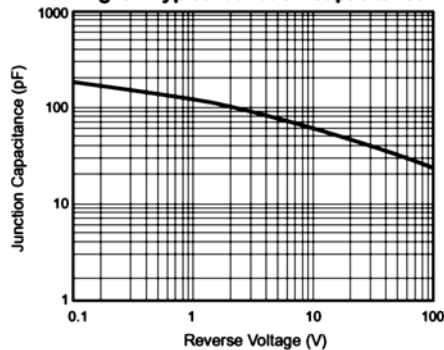
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Leakage Characteristics**

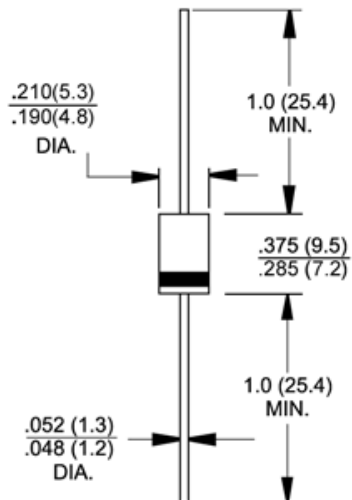


**Fig. 5 – Typical Junction Capacitance**



## Package Outline Dimensions

DO-201AD



Dimensions in inches and (millimeters)